

Patent
Docket No.: 158-P-C1553US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Peter Kuhlmann and
Reinhard Winter

Serial No.: 09/700,901
Filed: November 17, 2000

For: ALKYL RESIN EMULSIONS AND UTILIZATION OF THE SAME

Group Art Unit: 1714
Confirmation No.: 3028
Examiner: Patrick Dennis Niland

CERTIFICATE OF FACSIMILE TRANSMISSION UNDER 37 C.F.R. 1.8: I hereby certify that this correspondence is being sent by facsimile to the telephone number shown below, addressed to the Commissioner for Patents, Washington, D.C. 20231, on the below indicated date:
Facsimile Number: 703-872-9310
Date: January 9, 2003 By: Lynelle K. Grube
Lynelle K. Grube

RESPONSE

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

This is in reply to the Office Action mailed August 19, 2002. The USPTO is requested to correct its address record for correspondence to the undersigned attorney, as requested in applicants' Communication filed May 22, 2002. All correspondence should be sent to the address shown at the end of this Response.

This Response is accompanied by a Request for a Two Month Extension of Time to Reply. Claims 1-10 are pending in this application.

Rejection under 35 USC §112, second paragraph

Claims 1-10 were rejected under 35 USC §112, second paragraph as being indefinite on grounds that:

"The instant claim 1 recites "can be obtained..." This language encompasses the alkyl resin being obtained from other unspecified components also. Is unclear if the alkyl

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must be made from the recited ingredients or if it can be made from other ingredients. If the latter is the case, it is unclear what these ingredients are to be. This language is analogous to "such as".

"A broad range or limitation together with a narrow range of limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. [Citations omitted]. In the present instance, claims 1-10 recite the broad recitation "alkyd resin", and the claims also recite "can be obtained..." which is the narrower statement of the range/limitation because the phrase "can be" indicates that the following limitations are optional, i.e. not required, and therefore other unspecified "alkyd resins" are also encompassed by the claims other than that of the narrower group of alkyd resins denoted by "can be obtained"."

Applicants' claims are not indefinite. Claim 1 recites "an aqueous emulsion of a hydroxy-functional alkyd resin as the second component". The recited alkyd resin can conveniently be made by reacting together a list of recited ingredients, namely "an oleic or fatty acid component, a polyvalent alcohol, a polyether polyol having a molecular weight of 400 to 8,000, a monobasic carboxylic acid and a polycarboxylic acid or the anhydride thereof". The recited alkyd resin is required by the claim. The recited reaction scheme identifies the alkyd resin, but use of this reaction scheme is not required by the claim. It is customary in the alkyd resin art to describe an alkyd resin in terms of the ingredients from which it conveniently might be made. Those skilled in the art will be well aware that the recited alkyd resin could be made using other reaction schemes so long as the end result provides an alkyd resin containing moieties corresponding to those that would be obtained using the recited ingredients. For example, page 5, lines 11-12 of applicants' Written Description says that the oleic or fatty acid component can be formed *in situ* from precursors, e.g. fatty acid and triol, and reacted with the remaining ingredients as part of a one step reaction process. Applicants do not want an accused infringer to argue that the resulting alkyd resin is not within their claims.

The cited decisions in *Ex Parte Wu*, *Ex parte Steigerwald*, *Ex Parte Hall* and *Ex Parte Hasche* all involve or refer to "such as" clauses in claims, and are inapposite. Applicants have not used the phrase "such as" in their claims. Claims 1-10 will readily be understood by those

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skilled in the art and are not indefinite, see *In re Moore*, 439 F.2d 1232, 1236 169 USPQ 236, 239 (CCPA, 1971).

Rejection under 35 USC §102

Claims 1-10 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 3,639,315 (Rodriguez), on grounds that, *inter alia*:

"Rodriguez discloses the instantly claimed two component paint system. The system of the patentee contains the instantly claimed two components prior to reaction completion. It is expected that the instant reaction mixture begins to react immediately given the requirement of using the instantly claimed composition shortly after mixing."

This is incorrect. According to Rodriguez, a hydroxyl-containing water-dispersed resin is modified with an isocyanate in order to reduce its air-drying time. See in this regard the title ("Process for modifying hydroxyl-containing alkyds and polyesters in water dispersions"), the Abstract:

"Process and products formed by reacting hydroxyl-containing, water-dispersible resins such as alkyds and polyesters with organic isocyanate in the water dispersions by the addition with agitation of 0.1 to 20.0% of an organic isocyanate to the dispersed resin over a period of about 5 to 180 minutes at a temperature of 60° to 200°F. The products are water-dispersible coating resins capable of air drying in a short time."

and the stated object at col. 2, lines 3-5:

"Still another object of this invention is to produce urethane-modified resins, particularly from drying alkyds, which have improved drying time."

It will be clear to a person of ordinary skill in the art who reads Rodriguez that this reference only deals with one-component paint systems intended to be improved by modification with an isocyanate. These one-component systems are stable when stored as dispersions, and do not harden completely even after modification with the isocyanate:

"It was also found that the urethane-modified resin dispersions formed by the direct addition of isocyanate to water dispersions of resins were stable and

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had low viscosities compared to resins which had been reacted with isocyanate in solvent, solution, or dispersion. Another unexpected property of the resins modified by the process of this invention is a remarkably improved dry time." (col. 1, lines 57-64)

In order to harden these one-component systems, they have to be applied as a coating and exposed to air. This is apparent from Rodriguez Examples 1 to 3. Example 1 describes the preparation of a hydroxyl-containing resin which in Example 2 is modified by reacting it with an isocyanate. Both the resin of Example 1 and the resin of Example 2 are stable and would not harden without external influences. As is shown in Example 3, they have to be applied in a thin layer and exposed to air in order to harden.

In contrast, the two-component paint systems according to the present invention harden shortly after the first component (the hydroxyl-containing resin) is combined with the second component (the isocyanate). See in this regard page 8, lines 7-8 and page 10, line 3.

Rodriguez uses a type and amount of isocyanate sufficient to modify the properties of the hydroxyl-containing resin, but not enough to harden the resin prior to application. Using a more reactive isocyanate or a greater amount of isocyanate would be undesirable since such one-component systems could then no longer be applied to a substrate. In contrast, the type and amount of isocyanate in the two-component systems according to the present invention are selected such that the resin completely hardens shortly after the two components are mixed. The present inventors found that the hydroxyl-containing resins they describe are suitable for use in two-component systems and that, surprisingly, layer thicknesses of more than 120 μm can be obtained with these novel two-component systems without undesirable bubble formation. This could not be expected based on the cited art. Accordingly the claimed invention is not only novel but also inventive.

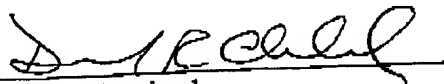
Conclusion

The claims do not recite "such as" language. Applicants claim specific alkyd resins, and define them in terms of ingredients from which the alkyd resins can be made. Applicants' claims are not anticipated by Rodriguez. Rodriguez describes one-component paint systems that form stable water dispersions and which do not harden until applied as a coating and exposed to air.

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Applicants claim two-component paint systems that do not form stable water dispersions and which harden shortly after the two components are mixed.

Respectfully submitted,



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